

147
"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

E7.3 10400
CR-131136

FOURTH BI-MONTHLY PROGRESS REPORT

University of Alaska

ERTS PROJECT 110-5

March 31, 1973

A. TITLE OF INVESTIGATION

Break-Up Characteristics of Chena River Basin

B. PRINCIPAL INVESTIGATOR / GSFC ID: U596

Robert F. Carlson
Associate Professor of Hydrology and
Director - Institute of Water Resources
University of Alaska
Fairbanks, Alaska

C. PROBLEMS IMPEDING INVESTIGATION

The major hold-up at this time is the installation of the color display unit (CDU) purchased under ERTS PROJECT 110-1. No imagery has been received since the last report since the satellite was turned off for a 3 month period in northern latitudes.

D. PROGRESS REPORT

1. Accomplishments during reporting period

The determination of the exact boundary between snow covered and snow free ground is very difficult on ERTS black and white prints and transparencies. One of the objectives of this study is to determine areas where the snow ablation is complete, still in progress, and not initiated. During the fall of 1972, the upper Chena River basin was partially snow covered during the satellite pass of 25 September (1064-20325). Enhancement of the images with a color additive viewer showed that clear delineation of the snow cover boundaries could be made. MSS bands 6 and 7 were projected through green and red filters respectively. The vegetation was visible as a red false color, while the snow covered areas were white. It should be noted that the snow cover was restricted to areas above dense forest. Application of the color additive viewer to ablation conditions will have to wait until imagery of the forthcoming spring break-up are received.

(E73-10400) BREAK-UP CHARACTERISTICS OF
CHENA RIVER BASIN Bimonthly Progress
Report (Alaska Univ., Fairbanks.) 2 p
HC \$3.00 CSCL 08H

N73-20362

Unclass

G3/13 00400

2. Plans For Next Reporting Period:

Project personnel will continue to collect climatological data during the ablation periods. As soon as the CDU is installed, personnel will acquaint themselves with the capabilities of this equipment. It will likely be another two months before imagery of the spring break-up will be received. Further sessions with the color additive viewer are planned so that additional filter combinations can be tried.

E. SIGNIFICANT RESULTS:

Utilization of the color additive viewer was made to delineate snow boundary conditions from imagery taken during the fall snow accumulation period. By using filters that falsely colored the vegetation red, the snow cover appeared white.

F. PUBLICATIONS:

None

G. RECOMMENDATIONS:

None

H. CHANGES IN STANDING ORDER FORMS:

None

I. ERTS IMAGES DESCRIPTION FORMS:

No new images were received since the last bi-monthly report.

J. DATA REQUEST FORMS:

None